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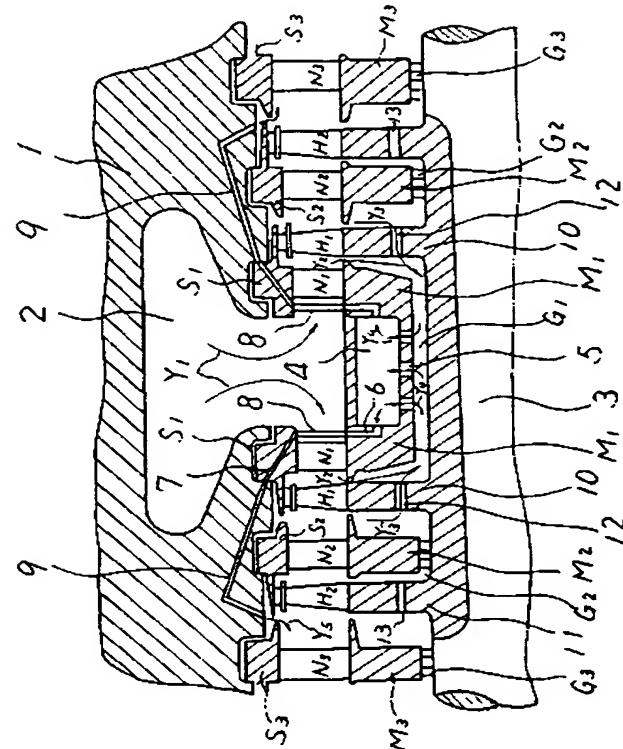
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TITLE : STEAM TURBINE



ABSTRACT : PURPOSE: To suppress the thermal fatigue of the rotor of a steam turbine employing a reheating cycle, by causing the mixture of leaking steam at the outlet ports of the inner rings of first-stage nozzle sections and that at the outlet ports of the butts of first-stage blades to flow as cooling steam on the surface of the rotor.

CONSTITUTION: Reheated steam of high temperature is conducted from an inlet opening 2 so that the steam is divided into two directions Y1. The divided portions of the steam flow through first-stage nozzles N1 so that the steam portions are accelerated. The steam portions then flow on the blades H1 of a rotor 3 to perform work. After that, the steam portions flow to downstream nozzles N2, N3 and blades H2. In that case, the surface of the rotor 3 is cooled by reheated steam of lower temperature than reheated steam portions Y2-Y5. Since the temperature of the steam Y3 which has performed work while flowing on the first-stage blades H1 drops much, the mixture of leaking steam Y2 from the first-stage nozzles N1 and that Y3 the first-stage blades H1 has a slightly lower temperature than the reheated steam Y1 at the inlet opening 2 of a medium-pressure turbine. For that reason, the surface of the rotor 3 is cooled by the mixture conducted through a gap G1.

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